

## Office Action Summary

Application No.

10/566,196

Applicant(s)

GELLRICH ET AL.

Examiner

Jennifer L. Doak

Art Unit

2872

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 29 March 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 22, 24-46 and 49-58 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 22, 24-46, 49-57 is/are allowed.
- 6) ☒ Claim(s) 58 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |  |
|--|--|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. <u>20100616</u> .                           |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application  |
| Paper No(s)/Mail Date _____.   | 6) <input type="checkbox"/> Other: _____.                          |

## **DETAILED ACTION**

### ***Allowable Subject Matter***

The indicated allowability of claim 34 is withdrawn in view of the fact that examiner mistakenly read it to be dependent from allowed claim 28, as was noted on page 8 of the previous Office Action. Examiner apologizes for the oversight. Prosecution on the merits of this application is reopened on claim 58, which is previous claims 22 and 34, is considered unpatentable for the reasons indicated below: please see the following rejection under 35 USC 102.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 58 is rejected under 35 U.S.C. 102(b) as being anticipated by Kaufman (US 5323301).

Regarding independent claim 58, Kaufman discloses the system having at least one system diaphragm (Figs. 1 and 2: via 18a and 18b), the system diaphragm comprising a multiplicity of mobile plates (18a) which are rotatably mounted (via ring bearing 26), wherein the plates have a spherical curvature (Fig.1; col. 3, lns. 25-27); wherein a drive unit for moving the plates is arranged outside a gas space (Fig. 1: 12 – 3200° K lamp with filament 14 -- the bulb is filled with gas for the purpose of emitting light).

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*Allowable Subject Matter*

Claims 22, 24-46, 49-57 are allowed.

The following is a statement of reasons for the indication of allowable subject matter:

With respect to claim 22, though the prior art discloses:

An optical imaging device, comprising: at least one system diaphragm, the system diaphragm comprising a multiplicity of mobile plates, each mobile plate is which are rotatably mounted on a pivot axis, wherein the plates have a spherical curvature wherein each pivot axis extends through a center of curvature (C) of a sphere,

the prior art of record fails to teach or suggest the aforementioned combination further comprising:

and wherein the sphere is defined as a single spherical surface in which the mobile plates move relative to one another.

The following is a statement of reasons for the indication of allowable subject matter:

With respect to claim 40, though the prior art discloses:

A variable system diaphragm for a microlithographic projection exposure apparatus having a multiplicity of plates held in a mobile fashion by means of solid state articulations; and wherein each mobile plate is rotatably mounted on a pivot axis defined by the solid state articulations, wherein each pivot axis extends through a center of curvature (C) of a sphere,

the prior art of record fails to teach or suggest the aforementioned combination further comprising:

and wherein the sphere is defined as a single spherical surface in which the mobile plates move relative to one another.

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The following is a statement of reasons for the indication of allowable subject matter:

With respect to claim 42, though the prior art discloses:

A variable system diaphragm having a multiplicity of mobile plates, the plates having a spherical curvature and being rotationally mounted, rotational bearing axes of the plates being aligned with a center of curvature (C) of a sphere,

the prior art of record fails to teach or suggest the aforementioned combination further comprising:

and the sphere determining a single surface on which the plates are mobile relative to one another.

The following is a statement of reasons for the indication of allowable subject matter:

With respect to claim 44, though the prior art discloses:

A projection objective in semiconductor lithography having optical elements, at least one variable system diaphragm for a microlithographic projection exposure apparatus being provided for introduction into a concave surface of an optical element, the diaphragm following a curved surface, and wherein the diaphragm comprises a plurality of mobile plates, each mobile plate is rotatably mounted on a pivot axis, wherein each pivot axis extends through a center of curvature (C) of a sphere,

the prior art of record fails to teach or suggest the aforementioned combination further comprising:

and wherein the sphere is defined as a single spherical surface in which the mobile plates move relative to one another.

The following is a statement of reasons for the indication of allowable subject matter:

With respect to claim 55, though the prior art discloses:

An optical imaging device comprising: at least one system diaphragm, the system diaphragm comprising a multiplicity of mobile plates, each mobile plate is rotatably mounted on a pivot axis, wherein the pivot axis extends through a center of curvature (C) of a sphere, and wherein the sphere is defined as a surface in

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which the mobile plates move relative to one another; and

the prior art of record fails to teach or suggest the aforementioned combination further comprising:

wherein at least two of the mobile plates are arranged to rotate on respective pivot axes in an overlapping configuration on two different spherical surfaces, the two different spherical surfaces having an identical center of curvature (C).

The following is a statement of reasons for the indication of allowable subject matter:

With respect to claim 57, though the prior art discloses:

An optical imaging device, in particular an objective for semiconductor lithography, having at least one system diaphragm, the system diaphragm comprising a multiplicity of mobile plates which are rotatably mounted, wherein the plates have a spherical curvature; and wherein the mobile plates are movable by means of a drive ring, the drive ring being mounted rotatably about an optical axis

the prior art of record fails to teach or suggest the aforementioned combination further comprising:

via solid state articulations.

With respect to claims 24-39, 51-54, these claims depend on claim 22 and are allowable at least for the reasons stated *supra*.

With respect to claim 41, this claim depends on claim 40 and is allowable at least for the reasons stated *supra*.

With respect to claims 43-44, these claims depend on claim 42 and are allowable at least for the reasons stated *supra*.

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With respect to claims 46, 49, 50, these claims depend on claim 45 and are allowable at least for the reasons stated *supra*.

With respect to claim 56, this claim depends on claim 55 and is allowable at least for the reasons stated *supra*.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer L. Doak whose telephone number is (571)272-9791. The examiner can normally be reached on Mon-Thurs: 7:30A-5:00P, Alt Fri: 7:30A-4:00P (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephone B. Allen can be reached on 571-272-2434. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. L. D./  
Examiner, Art Unit 2872

/Stephone B. Allen/  
Supervisory Patent Examiner, Art Unit 2872